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AUTHOR Romer, Nancy
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ABSTRACT

Horner's study of the motive to avoid success (Ms) was replicated on fifth through eleventh grade males and females. Ss were given a TAT-like measure of Ms and a measure of sex role identity. They also performed a series of tasks in competitive and non-competitive conditions. No sex differences or clear age trends in Ms imagery were found; however, there were sex and grade differences in the reasons given for avoiding success. Ss, regardless of Ms status, performed better in non-competitive than competitive conditions. Developmental data show a tendency for ninth and eleventh grade females with Ms to perform better in non-competitive conditions, while older females without Ms perform better in competitive conditions. Eighth, ninth and eleventh grade males with Ms performed better in a competitive condition, while their peers without Ms performed better in a non-competitive condition. These results question that a relationship exists between Ms imagery and competitive performance for males and young females, but indicate such a relationship for older females. Sex role identity was not related to Ms, thus casting doubt on the notion that Ms is a direct function of feminity. (Author)

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Sex Differences in the Development of the Motive to Avoid Success, Sex Role Identity, and Performance in Competitive and Non-Competitive Conditions[1]

Nancy Romer Brooklyn College (CUNY)

ABSTRACT

Horner's study of the motive to avoid success (M_{-s}) was replicated on fifth through eleventh grade males and females. Ss were given a TAT-like measure of M_{-s} and a measure of sex role identity. They also performed a series of tasks in competitve and non-competitive conditions. No sex differences or clear age trends in M_{-s} imagery were found; however, there were sex and grade differences in the reasons given for avoiding success. Ss, regardless of M_{-s} status, performed better in non-competitve than competitive conditions. Developmental data show a tendency for ninth and eleventh grade females with M_{-s} to perform better in non-competitive conditions, while older females without M_{-s} perform better in competitive conditions. Eighth, ninth and eleventh grade males with M_{-s} performed better in a competitive condition, while their peers without M_{-s} performed better in a non-competitve condition. These results question that a relationship exists between M_{-s} imagery and competitive performance for males and young females, but indicate such a relationship for older females. Sex role identitiy was not related to M_{-s}, thus casting doubt on the notion that M_{-s} is a direct function of femininity.

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Horner's (1968) study of the motive to avoid success (M_{-s}) has introduced an insightful and potentially important concept to the field of motivation. Horner maintains that capable achievement motivated females experience negative or ambivalent motives when confronted with the anticipation of success in achievement-oriented situations. She hypothesizes that females in our culture learn that success in school, especially in prestigious professional school, is incompatible with popular views of femininity, e.g., non-competitiveness. Thus, in approaching an achievement-oriented situation, particularly involving competition, females experiencing a conflict between femininity and success would indicate an avoidant tendency toward success.

Horner's 1964 data collection yielded a highly significant difference in the frequency of M_{-s}: college females expressed this motive seven times as often as their male counterparts. Since that time, many other researchers, in replication attempts, have found males and females of many ages to express equal and high frequencies of M_{-s} (e.g., Hoffman, 1974; Baruch, 1973; Tresemer, 1973).

Horner's original work indicated that females with M_{-s} tended to perform better in alone, non-competitive conditions than in group, competitive conditions. The opposite pattern was found for females without M_{-s} and all males. This finding has not been clearly replicated with adults or children (e.g., Morgan and Mausner, 1972; House, 1972). Clarification of this behavioral validation is crucial as motivation theorists insist of behavioral data as the proof or negation of the function of a motive as presently measured (Atkinson and Feather, 1966).

Studies relating M_{-s} to femininity in women have yielded fairly consistent results: M_{-s} is indicative of conflicts about femininity and has been found in females with fairly traditional sex-role orientations (Schwenn, 1969; Parker, 1972; Horner and Walsh, 1972). Unfortunately, no studies have been done relating M_{-s} to sex-role orientation in men or in children.

The present study was designed to replicate both the behavioral and non-behavioral aspects of Horner's work, using as Ss pre-adolescent and adolescent males and females. The aim was to discover at what point, in chronological development, the presence of M_{-s} imagery in the TAT-like story is related to performance decrements in competitive situations and how this relationship and the types of M_{-s} stories differ for males and females. In addition we hoped to probe into the relationship between M_{-s} and sex role identity. The following hypotheses were tested:

1. The frequency of M_{-s} imagery increases from fifth through ninth grades for males and females due primarily to an increased awareness of the advantages and disadvantages of top success. We should expect eleventh grade females to frequently offer M_{-s} themes because top success remains inconsistent with popularity (Coleman, 1961). However, we should expect relatively fewer eleventh grade boys to express M_{-s} because top success is becoming more, rather than less, consistent with their sex role with age.

2. Males and females will not avoid success in the same manner. Females will concentrate their M_{-s} themes of affiliative concerns and males will write stories rejecting or putting down the value of success (Hoffman, 1974). We should not expect the content of females' M_{-s} stories to change much with age but rather to increase in frequency. We should expect the rejection of success theme to become more common with age for males with the onset of increased peer pressure.

3. The presence of M_{-s} imagery will predict better performance in non-competitive than in competitive conditions. This predictive relationship should hold for males and females alike since M_{-s} is a concept involving avoidance of top success (Horner, 1968).

4. The presence of M_{-s} imagery will be positively related to feminine sex role identity in females and males in all grades, if, in fact, the conflict between femininiy and achievement lies at the basis of M_{-s}.

METHOD

Subjects. The Ss were white, middle class males and females in the fifth, seventh, eighth, ninth and eleventh grades in a small midwestern city dominated by a university. The sample consisted of 169 males and 168 females (see Table 1 for exact number of males and females in each grade).

Procedure. The data were collected between November 1972 and February 1973. Each S was given a TAT-like measure in their classrooms. The measure contained five different story cues, but only the fifth story cue was used to measure M_{-s} The stories, written by Ss in response to cue #5, were coded according to Horner's original coding system and then coded again for various subthemes.[2] The purpose of the fifth cue was to present a success situation that was realistic to the Ss and neither too far in the future nor too sex-typed in a masculine manner. We were aiming at realistic top achievement. Each S received a cue depicting top performance one school-level beyond his or her present level. Thus, to the elementary school Ss we gave this cue: "At the end of the year, Anne (John) finds herself (himself) at the top of the Junior High School class." For Junior High School Ss we described Anne or John as being at the top of the High School class, and for the High School Ss we had Anne or John at the top of the college class. In presenting different cues to the elementary, junior high, and high school Ss, we risked the possibility of tapping attitudes or

motives toward different kinds of achievement. For example, top success in junior high school may be considered more feminine or less masculine than top success in college. Nevertheless, this risk seemed necessary to insure that each S could easily comprehend the type of success to him or her.

Subjects performed a series of scrambled words tasks under five different conditions. Each task consisted of fifteen 4-letter words of comparable difficulty to unscramble. Four experimental conditions took place at one session in the classrooms from which the Ss were recruited. There were 20 to 30 male and female peers present and participating during the group performance sessions. Ss were asked to unscramble as many words as they could. Ss were told that the Es were studying how people perform under various conditions. The terms of each condition were announced directly prior to that condition. The following is a description of the four conditions:

Not-explicitly competitive group: Ss performed the word-task in the group but no clear inference was made of impending competition. Ss were told that the scores would be announced only to the individual Ss, not to the class.

Competition against a group: Ss performed the word-task in the group with competition explicit. Ss were told that only one person in the class could be the winner and that the winner would be announced to the class.

Competition against a same sex individual: Each S was paired with a same sex peer. They were asked to perform the task in competition with that individual while remaining in the classroom. They were told that one winner per pair would be announced to the class.

Competition against an opposite sex individual: This condition was

identical in every way to "competition against a same sex individual" except that the Ss were paired with an individual of the opposite sex.[3]

The fifth experimental condition, labeled non-competitive alone, took place in a small room isolated from other people. No one was present in the room while the S did the task and no scores were announced.

The Ss were also administered a modified version of the Broverman, et.al. (1972) Sex Role Questionnaire. This eleven-item measure was devised and tested specifically for children by the author and Dr. Carol Smokier.

RESULTS

Frequency of M_{-s}.

The results corroborate the recent studies which indicate that the frequency of M_{-s} imagery is not very different for males and females (See Table 1). Utilizing a log linear model of a contingency table (Shaffer, 1973), no significant effects were found for either sex or for the sex grade interaction. A significant main effect was found for grade (Pearson X^2=25.028, df=14, $p < .05$). Ninth grade Ss as compared with fifth or eighth graders, wrote a higher proportion of stories with M_{-s} imagery (X^2=14.35, df=1, $p < .001$ and X^2=4.432, df=1, $p < .05$, respectively). There is a monotonic increase in M_{-s} for males up through 9th grade. The 11th grade males show a sharp decline in this motive. The females display a monotonic increase in M_{-s} from fifth though 11th grade, save for the seventh grade girls who show a very low frequency of M_{-s}.

Themes of Success-Avoidance: Females more frequently than males write M_{-s} stories involving the theme of loss of affiliation of the success. Of the 102 males with M_{-s} imagery, 27 offered loss of affiliation themes; 43 out of 102 females with M_{-s} offered this theme (X^2=5.50, df=1, $p < .02$).

This subtheme was offered more than any other. A typical story with this theme involved Anne losing friends because of her conceit or their jealousy. The second most common subtheme for females was denial that the success ever occured or that it occurred not through Anne's ability but rather through cheating, the supernatural, etc.

For males the most common subtheme described tragic events happening as a consequence of the success, e.g., getting hit by a truck or dying of a rare disease. The second most common subtheme for males was negative or loss of affiliation from others. The third most common M_{-s} story for males was based on a cynical interpretation of the phrase "top of the class". Some Ss described John as the "top dope dealer" or "top marble swallower" in the class. Others had John physically stuck to the ceiling.[4]

In general, no age differences were apparent in the frequency of the various subthemes, except for the theme of rejection or putting down success. In the eleventh grade, 44% of the males and 30% of the females rejected or put down the value of success in their stories. In the other grades, between 6% and 13% of the Ss told stories with this theme.

M_{-s} and Performance: Females scored significantly higher than males in the word task ($F = 7.524$, $df=1$, $p < .01$) (mean score for females = 10.32, mean score for males = 9.37). Ss with M_{-s} performed better in all conditions than Ss without M_{-s} ($F=5.103$, $df=1$, $p < .01$). But this was mainly due to the superior performance of females with M_{-s}, who significantly out-performed the other Ss on all conditions, not just the non-competitive conditions. (Mean performance scores: females with M_{-s} =11.46; females without M_{-s}=9.39; males with M_{-s}=9.18; males without M_{-s} =9.35). The scrambled words that

may be seen as a gross measure of verbal ability. The results might suggest that the more able females are more likely to be motivated to avoid success because it is more clearly within their reach, while ability seems unrelated to M_{-s} in males. These data support Horner's hypothesis that closeness to achievement may be anxiety provoking to females. These results might also suggest that the presence of M_{-s} in females aides performance in all conditions, whereas the presence of M_{-s} in males does not affect performance.

Horner utilized a different method of data analysis measuring the direction of the difference between performance in the "non-competitive" and "competitive"conditions.

When this method of analysis is used on the present data, the results are even more interesting. For the "non-competitive alone" condititions, each individual S's score was compared with his or her score in each of the other four conditions, and the direction of the difference was noted. Since our tasks for the various conditions were virtually identical, we did not have to convert our scores into Z-scores as Horner did. This comparison analysis measures whether Ss perform better in one condition than another. It does not measure the quantity of difference, just the presence of different patterns of performance.

The data will be presented as follows: Tables 2,3,4 and5 contain both developmental and combined group data for each of the four condition comparisons. Thus in analyzing the combined group data, the reader should refer to the bottom segment of each of the tables. In analyzing the developmental data, the reader should refer to the top five segments of the tables.

Combined across grades, females with or without M_{-s} imagery showed no significantly different performance patterns in each of the four comparisons [comparison 1, $\underline{X}^2$=.80, $\underline{df}$=2 (Table 2); comparison 2, $\underline{X}^2$=1.47, $\underline{df}$=2, (Table 3); comparison 3, $\underline{X}^2$=3.54, $\underline{df}$=2 (Table 4); comparison 4, $\underline{X}^2$=2.92, $\underline{df}$=2 (Table 5)]. These results indicate that the presence of M_{-s} imagery does not predict whether females will perform better in non-competitive alone conditions or in more competitive conditions. This clearly contradicts Horner's earlier findings of improved performance in alone conditions for females with M_{-s} imagery.

Careful analysis of the developmental data uncovers an interesting and possibly crucial finding. Looking at comparison 1 (Table 2), females in the ninth and eleventh grades with M_{-s} imagery more often perform better in the non-competitive alone condition while ninth and eleventh grade females without M_{-s} imagery more often perform better in the non-explicitly competitive condition (Fisher Exact Test $\underline{p} < .05$).[5] These results offer support to Horner's original hypothesis. It may well be that M_{-s} does not begin to operate as an avoidant tendency in females until late in adolescence. The effect of the presence of M_{-s} imagery on this sample of female adolescents may be indicative of the ambivalence toward success that many women have been found to experience.

Combined across grades, males with and without M_{-s} imagery do not show performance pattern differences in comparisons 1, 3 and 4 [$\underline{X}^2$=1.97, $\underline{df}$=2 (Table 2); $\underline{X}^2$=1.60, $\underline{df}$=2 (Table 4); $\underline{X}^2$=.83, $\underline{df}$=2 (Table 5), respectively]. In comparison 2 (Table 3), a significant difference in performance pattern between the two groups of males is found ($\underline{X}^2$=7.19, $\underline{df}$=2, $\underline{p} < .05$). Males with M_{-s} imagery more often do better in the competitive group condition while

males without M_{-s} imagery more often do better in the non-competitive alone condition. If M_{-s}, as measured here, did function for males the way that Horner described it for females, we would expect the exact opposite effect to occur. It is possible that M_{-s} functions in a different fashion for males and females.

The developmental data indicate no significant effects of M_{-s} for males in the four comparisons. However, looking at the data for all males, regardless of M_{-s} status, we find that eighth, ninth and eleventh grade males combined tend to perform better in the non-competitive alone condition than other conditions while the younger males perform best in the more competitive conditions. The following are the chi-square statistics for the comparison of young and older males' performance in the non-competitive alone condition and each of the other conditions: non-explicitly competitive group ($\underline{X}^2=8.12$, $\underline{df}=2$, $\underline{p}<.02$), competition against a group ($\underline{X}^2=6.63$, $\underline{df}=2$, $\underline{p}<.05$), competition against a some sex peer ($\underline{X}^2=13.45$, $\underline{df}=2$, $\underline{p}<.01$), competition against an opposite sex peer ($\underline{X}^2=6.83$, $\underline{df}=2$, $\underline{p}<.05$).

No significant difference in pattern of performance is found between younger and older females, regardless of the definition of "younger" and "older", i.e., either fifth and seventh grade as younger or fifth, seventh and eighth grade as younger.

$\underline{M_{-s}}$ and Sex Role Identity: Sex role identity scores were found to be unrelated to the presence of M_{-s} imagery for males and females (= -.07 and .01 , respectively). Similar results were found at each of the grade levels.

In an attempt to clarify the relationship between M_{-s} and sex role identity, we posed the following question: are there any differences between those females with, according to Horner, the classically female pattern of best

performance in the non-competitive alone comdition, those Ss with the classically masculine pattern of best performance in the more competitive condition, and those Ss with equal performance in these two conditions? The sex role identity scores of Ss in the three groups were compared, but no meaningful differences were found.

DISCUSSION

Hypothesis 1 was partially confirmed. This research uncovered no clear sex differences or definitive developmental trends in the presence of M_{-s} as measured by the TAT-like method. However, by eleventh grade, the frequency of M_{-s} in males seemed to have peaked and was on the decrease while the frequency of M_{-s} in females was on the increase. This may be due to the perceived incompatibility of success and the adult female role and the compatibility of success and the male role.

Hypothesis 2 was also partially confirmed. We did find sex differences in the type of M_{-s} stories told. Females more often told M_{-s} stories dealing with the loss of affiliation and denial of success. Males more often told M_{-s} stories with tragic consequences or had cynical interpretations of the cue. The oldest Ss tended to tell stories rejecting the value of success more often than younger Ss.

We see, then, that while the frequency of M_{-s} is generally no different for males and females, the types of subthemes or reasons they give for avoiding success are somewhat different. Females fear loss of affiliation in the face of success more than males. Boys seem to be more flamboyant and cynical in dealing with their anxieties; girls more often choose to deal with their anxiety about success by denying responsibility for it.

Perhaps the peer culture's questioning of traditional and academic success has left its mark on the eleventh graders. They are also closer to

making success or career-oriented decisions than the younger Ss and may seriously be wondering where to put their energies in the future. These Ss also came from an academic community and may choose to avoid the pressures of their achieving parents. These Ss may also be modeling the behavior and/or attitudes of the many college students living in their town.

One surprising result of the subtheme analysis is that only 4% of the girls told stories implying that success is considered inappropriate for females. No male S told a story with this theme. Horner's original theory stated that the basis of M_{-s} for females is the conflict between achievement and femininity. These data indicate that prior to college, M_{-s} in females is based more of affiliative concerns per se, while perhaps in college and beyond, M_{-s} in females may focus on sex-appropriate ways of gaining (ar avoiding the loss of) affiliation. Perhaps adult demands aid in fusing affiliation and sex appropriateness in women. Hoffman (1974) found only 5% of her college women telling stories dealing with being females as a problem vis-a-vis particular kinds of success. Unfortunately Horner (1968) does not offer a subtheme analysis of her Ss' stories to help clarify this theoretical problem.

Hypothesis 3 was, for most of the sample, not confirmed. The relationshop between M-s and performance on competitive and non-competitive tasks was quite complex. Presence or absence of M_{-s} imagery did not predict the pattern of performance for females across all grades. However, M_{-s} imagery did predict the performance pattern of older females and males across grades but in opposite directions. Comparing older females with M_{-s} to their peers without M-s, we find the former group more often performs best in the non-competitive alone condition than in the explicitly competitive condition.

These results raise several interesting questions. While the expected

effect of M_{-s} on performance appears for ninth and eleventh grade females, the effect does not appear for younger females. It could be that M_{-s} does not become established in a female's motivational network until well into adolescence, i.e. ninth grade or about 14 years of age. M_{-s} would then be considered a developmental phenomenon affected perhaps by puberty, the onset of heterosexual dating, clearer sex role expectations, etc.

Comparing older males across grades with M_{-s} imagery to their peers without M-s, we find the former group more often performs best in the competitive group conditions than in the non-competitive alone condition. That the presence of M-s imagery predicts different and opposite effects in males and females raises more doubts about the validity of M_{-s} as a real motive for males at any point in time. It is also possible that the younger Ss, in lieu of some recent changes in values and peer and adult expectations, experienced different socialization histories. Thus, we might hypothesize that they never will develop the same relationship between M_{-s} and performance as the older females.

Older males showed a performance pattern opposite to Horner's males, i.e., they perform best in non-competitive conditions. It is quite possible that the value of "success" for males has changed. In the last ten years, we have witnessed a general disillusionment with traditional achievement. That the male Ss share this view is evident from the frequency of M_{-s} stories and the particular themes in their stories. Males may also see "success" in school or a classroom word-task as feminine. Perhaps they were embarrassed to try too hard in the word tasks performed in front of their peers. Perhaps success in college (as shown by Horner's sample) is not seen as feminine. This may also explain why the eleventh grade males had a fairly low percentage of

Ss with M_{-s}. It should be remembered that the eleventh graders received a cue with success occuring in college, while the fifth and seventh, eighth, and ninth graders received cues portraying success in junior and senior high school, respectively. In these pre-college settings, success is often viewed as feminine. The data make it clear that M_{-s}, as measured by the TAT-like method and Horner coding system, does not function for males as a genuine motive by the standards of the expectancy-value theory of motivation, i.e., it does not affect behavior in achievement oriented situations.

Young females, on the other hand, may see the word-task situation as a way to show their competence without being aware of sex role connotations. This permits them to perform well in competition with others. Older females may view the word-task situation as competitive and therefore masculine. Thus the females motivated to avoid success would hold back their efforts for fear of appearing too competitive or "non-feminine."

Hypotheses 4 is clearly not supported as no relationship was found between M_{-s} and sex role identity. In addition, sex role identity scores did not help predict performance patterns of the older females following the pattern found earlier by Horner. This helps to rule out the differences in motivation and performance as being due to sex role identity at least in school-aged children. It does not, however, rule out the possibility that differences in M_{-s} and performance are due to knowledge of the female role or societal expectations for "appropriate" sex role behavior. Older female Ss with M_{-s} may not have particularly internalized feminine sex role identities but they may be very aware of sex role expectations and modify their performance accordingly.

If we are willing to accept M_{-s} as something developing later in life for females, what, then, is M_{-s} for males? If M_{-s} is not related to sex

role identity, could sex role knowledge be central to this motive's growth? It is certainly probable that M_{-s} is more common in females because females are more often punished as well as rewarded for achievement throughout their socialization. While males may receive rewards for achievement, some males probably are discouraged for certain types of achievement. Therefore, it is most likely that M-s exists for some males as well as females. At present the Horner concept and method of measuring M_{-s} may be of value for females. The data presented here are suggestive of some of the problems involved in the present state of method and theory in this area. There is a clear need for research into the analysis and measurement of this motive, particularly in males.

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FOOTNOTES

1. The present study is based on a doctoral dissertation submitted in partial fulfillment of the requirements of a Ph.D. degree at the University of Michigan. The thesis was written under the name Nancy Romer Burghardt. Appreciation is expressed to Lois Wladis Hoffman who served as advisor, critic and support throughout the endeavor and to Carol Smokler for devising with me a new measure of sex role identity for children. Finally, many thanks are given to the principals, teachers, and students of the Ann Arbor, Michigan schools. The author is presently Assistant Professor in the Psychology Department at Brooklyn College of the City University of New York, Brooklyn, New York 11210.

2. The author coded all of the stories for presence or absence of M-s imagery and subthemes. Coder reliability with stories coded previously by Horner was .95. The author's record reliability was .98. The author's reliability was again checked by two independent coders on the actual data. Reliability levels were at the .90 and .87 levels. Many thanks are extended to Julie Drew and Pat Patrelli for their aid in the reliability check. Since so many of the Ss included "Anne" or "John's" name and school level in their stories, the coders were unable to totally code blindly viv-a-vis age and sex of Ss.

3. Each of the 16 classes involved in the study received these first 4 conditions in random order so that no clear order effect would appear on the experimental conditions. All Ss received a practice scrambled words task prior to any of the conditions. While there was a marked improvement in number of words correctly unscrambled from the practice to the first experimental condition, no order effect among the other conditions was found.

4. Twenty-two of the males and ten of the females told stories with this theme. Although these stories would be scored as M-s according to Horner's coding system, i.e., "denial of the situation described by the cue" and/or "bizarre, inappropriate, unrealistic or non-adaptive responses to the situation described by the cue" (Horner, 1968, p. 105), Horner does not indicate cynical or joke stories specifically as M-s. To verify their inclusion in the M-s category, the performance scores of Ss with this theme were checked against scores of Ss without any M-s imagery and Ss with other M-s themes. Their data looked very much like the data of Ss with other M-s themes. Thus, they were retained in the M-s category.

5. This analysis was done by combining the ninth and eleventh grade females who perfomed equally well in the two conditions with females who performed best in the non-competitive alone condition and comparing them with females who performed best in the non-explicitly competitive group condition. The cell frequencies were too small to do a 2x3 chi-square statistic and so this collapsing of cells was necessary to perform a Fisher exact test which requires a 2x2 design and permits cell frequencies under five.

Table 1

Percentages of Males and Females with Motive to Avoid Success Present in the 5th, 7th, 8th, 9th and 11th Grades

Sex	5		7		8		9		11		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Males	36	47.2	36	58.3	33	60.6	48	72.9	16	54.3	169	60.3
Females	35	62.9	45	37.8	36	63.9	39	76.9	13	76.9	168	60.7
Total	71	54.9	81	46.9	69	62.3	87	74.7	29	65.5	337	60.5

Table 2

Comparison One

Number of Male and Female Ss, with and without Need to Avoid Success, Performing Better or Equal in Non-Competitive Alone or Not-Explicitly Competitive Group Conditions, in the Fifth, Seventh, Eighth, Ninth and Eleventh Grades*

Grade	Sex	With or Without Need to Avoid Success	Number of Ss with Better Performance in Not-Explicitly Competitive Group Conditions	Number of Ss with Equal Performance in Both Conditions	Number of Ss with Better Performance in Non-Competitive Alone
5	M	Without	5	2	6
		With	7	4	4
	F	Without	3	4	4
		With	13	2	7
7	M	Without	6	1	6
		With	7	1	11
	F	Without	10	4	13
		With	7	2	7
8	M	Without	2	2	9
		With	9	1	9
	F	Without	5	0	6
		With	10	4	7
9	M	Without	2	2	9
		With	8	5	16
	F	Without	4	1	3
		With	7	7	14
11	M	Without	0	2	5
		With	2	0	7
	F	Without	2	0	0
		With	1	5	3
All	M	Without	15	9	35
		With	33	11	47
	F	Without	24	9	26
		With	38	20	38

*Ss utilized in this analysis had total data, i.e., they had scores for each of the experimental conditions.

Note: This comparison is equivalent to the original Horner comparison.

Table 3

Comparison Two

Number of Male and Female Ss, with and without Need to Avoid Success, Performing Better or Equal in Non-Competitive Alone or Competition against A Group Conditions, in the Fifth, Seventh, Eighth, Ninth and Eleventh Grades *

Grade	Sex	With or Without Need to Avoid Success	Number of Ss with Better Performance in Competition against a Group	Number of Ss with Equal Performance in Both Conditions	Number of Ss with Better Performance in Non-Competitive Alone
5	M	Without	6	2	5
		With	10	0	5
	F	Without	7	0	4
		With	5	4	13
7	M	Without	3	2	8
		With	10	3	6
	F	Without	9	4	14
		With	8	2	6
8	M	Without	3	2	8
		With	6	3	10
	F	Without	3	2	6
		With	7	6	8
9	M	Without	2	2	9
		With	13	4	12
	F	Without	4	1	3
		With	12	4	12
11	M	Without	1	2	4
		With	4	1	4
	F	Without	2	0	0
		With	1	1	7
All	M	Without	15	10	34
		With	43	11	37
	F	Without	25	7	27
		With	33	17	46

* Ss utilized in this analysis had total data, i.e., they had scores for each of the experimental conditions.

Table 4

Comparison Three

Number of Male and Female Ss, with and without Need to Avoid Success, Performing Better or Equal in Non-Competitive Alone or Competition against A Same Sex Individual Condition, in the Fifth, Seventh, Eighth, Ninth and Eleventh Grades*

Grade	Sex	With or Without Need to Avoid Success	Number of Ss with Better Performance in Competition against A Same Sex Individual	Number of Ss with Equal Performance in Both Conditions	Number of Ss with Better Performance in Non-Competitive Alone
5	M	Without	6	3	4
		With	9	1	5
	F	Without	4	1	6
		With	10	2	10
7	M	Without	5	1	7
		With	9	4	6
	F	Without	14	3	10
		With	7	5	4
8	M	Without	3	3	7
		With	6	0	13
	F	Without	4	1	6
		With	8	7	6
9	M	Without	1	2	10
		With	10	7	12
	F	Without	1	4	3
		With	10	5	13
11	M	Without	0	0	7
		With	2	2	5
	F	Without	2	0	0
		With	0	2	7
All	M	Without	15	9	35
		With	36	14	41
	F	Without	25	9	25
		With	35	21	40

*Ss utilized in this analysis had total data, i.e., they had scores for each of the experimental conditions.

Table 5

Comparison Four

Number of Male and Female Ss, with and without Need to Avoid Success, Performing Better or Equal in Non-Competitive Alone or Competition against An Opposite Sex Individual Condition, in the Fifth, Seventh, Eighth, Ninth and Eleventh Grades*

Grade	Sex	With or Without Need to Avoid Success	Number of Ss with Better Performance in Competition against An Opposite Sex Individual	Number of Ss with Equal Performance in Both Conditions	Number of Ss with Better Performance in Non-Competitive Alone
5	M	Without	3	3	7
		With	7	1	7
	F	Without	6	2	3
		With	5	4	13
7	M	Without	5	2	6
		With	8	6	5
	F	Without	10	2	15
		With	7	4	5
8	M	Without	2	5	6
		With	9	1	9
	F	Without	1	2	8
		With	9	7	5
9	M	Without	5	3	5
		With	6	8	15
	F	Without	4	2	2
		With	7	8	13
11	M	Without	1	0	6
		With	1	3	5
	F	Without	0	1	1
		With	1	3	5
All	M	Without	16	13	30
		With	31	19	41
	F	Without	21	9	29
		With	29	26	41

*Ss utilized in this analysis had total data, i.e., they had scores for each of the experimental conditions.